

FIG. 1

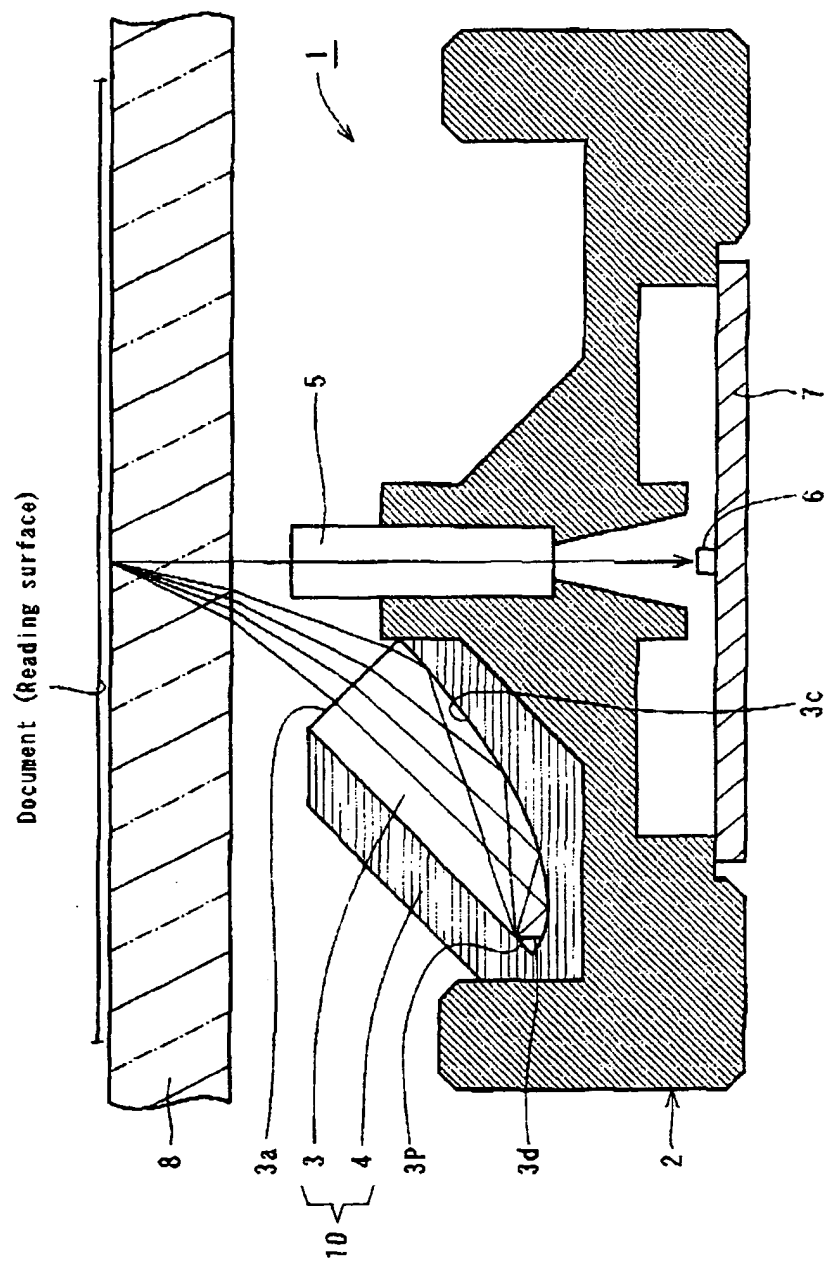


FIG. 2

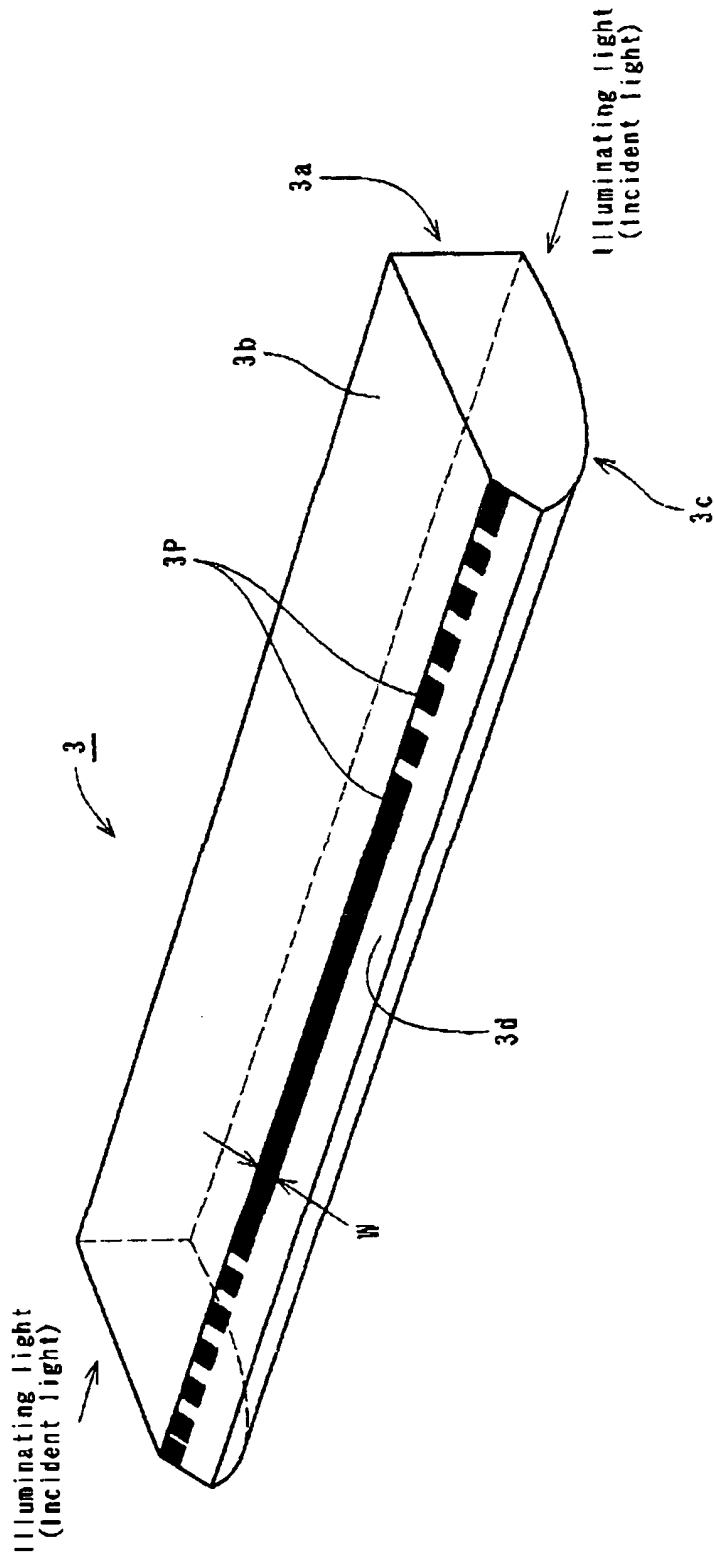


FIG. 3

Light intensity characteristics of line-illuminating device
 incorporated with light guide according to the present invention
 Scattering pattern width: 0.3 mm
 Light guide installation angle: 45 degrees

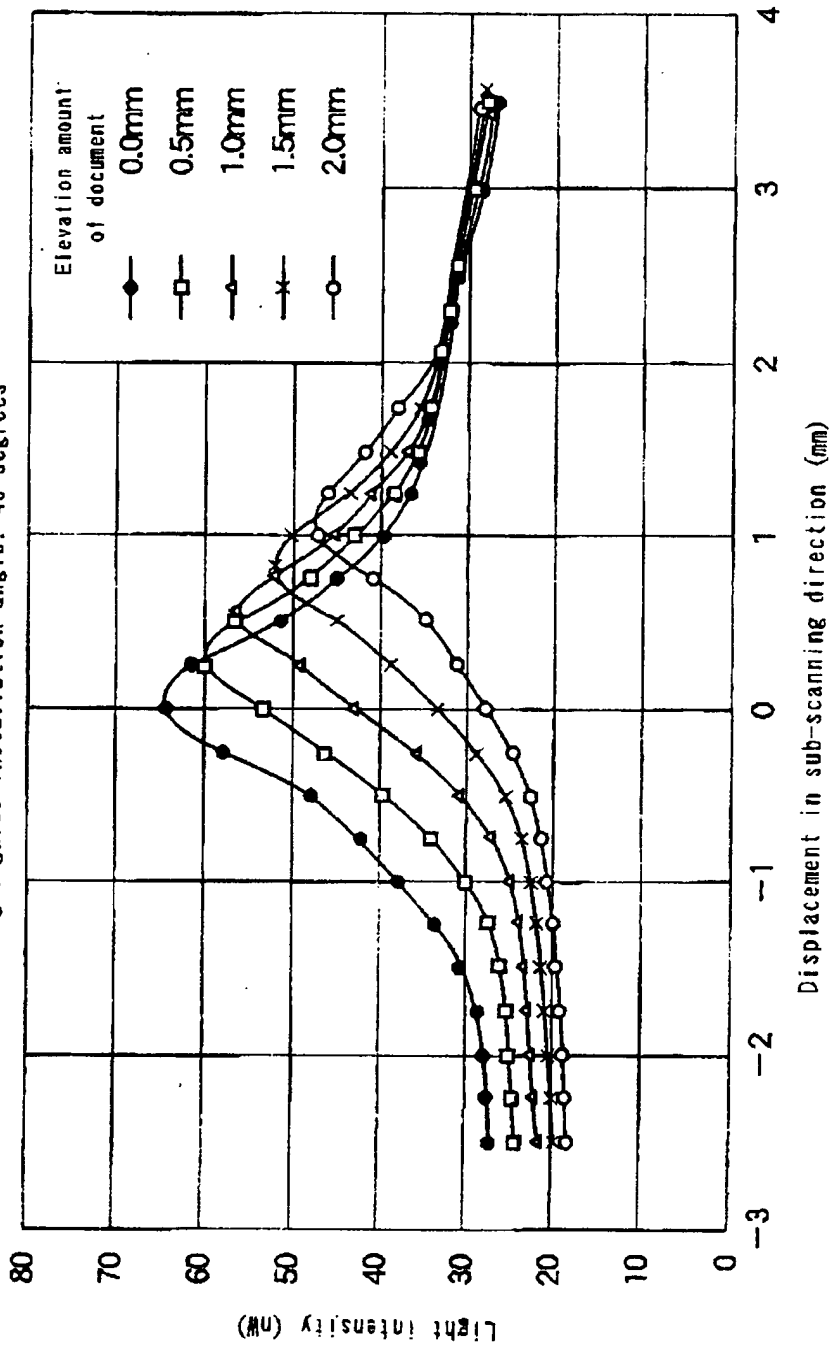


FIG. 4

Light intensity characteristics of line-illuminating device
 incorporated with light guide according to the present invention
 Scattering pattern width: 0.6 mm
 Light guide installation angle: 45 degrees

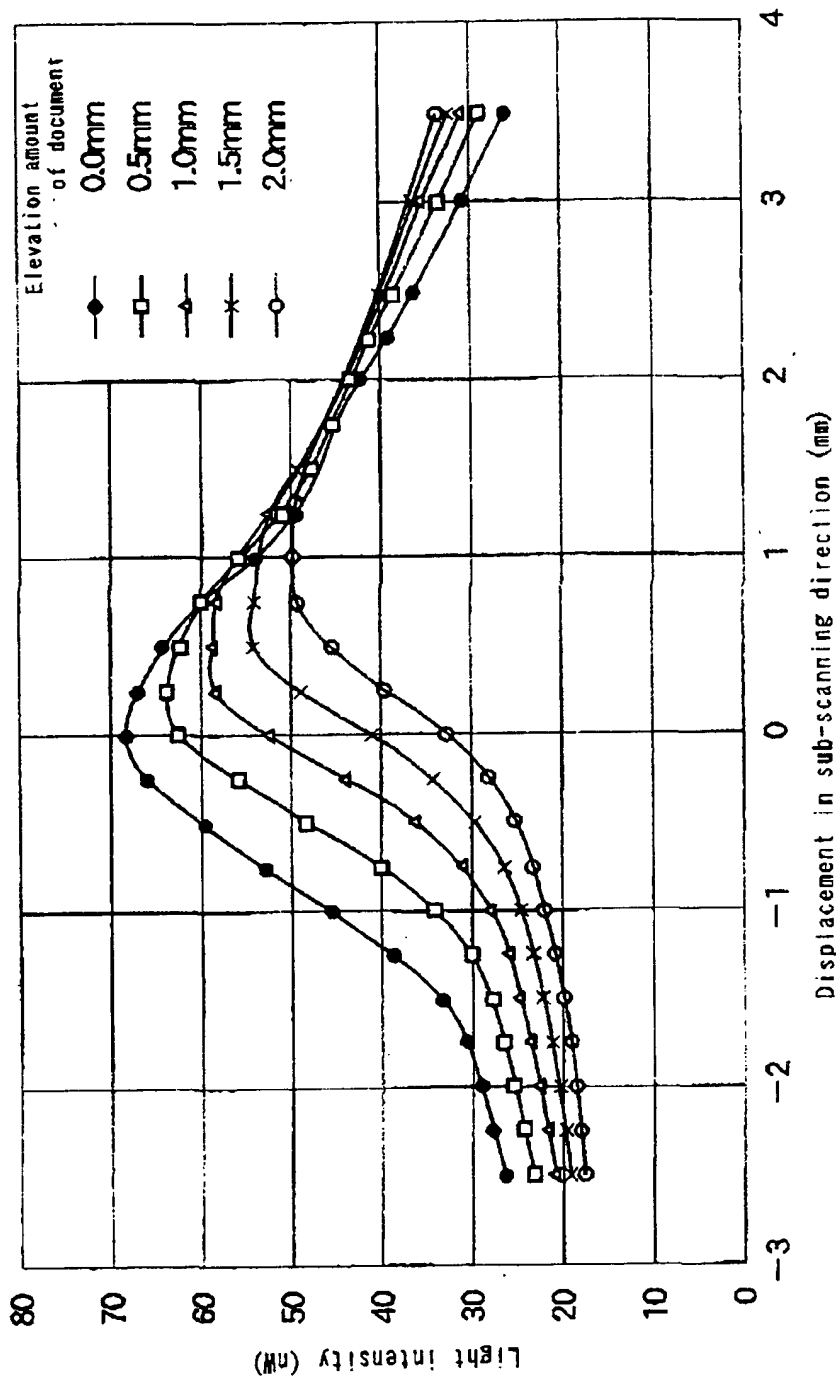


FIG. 5

Characteristics of 0.5 C chamfering & C plane printing
(Without correction for decrease of lens light quantity)

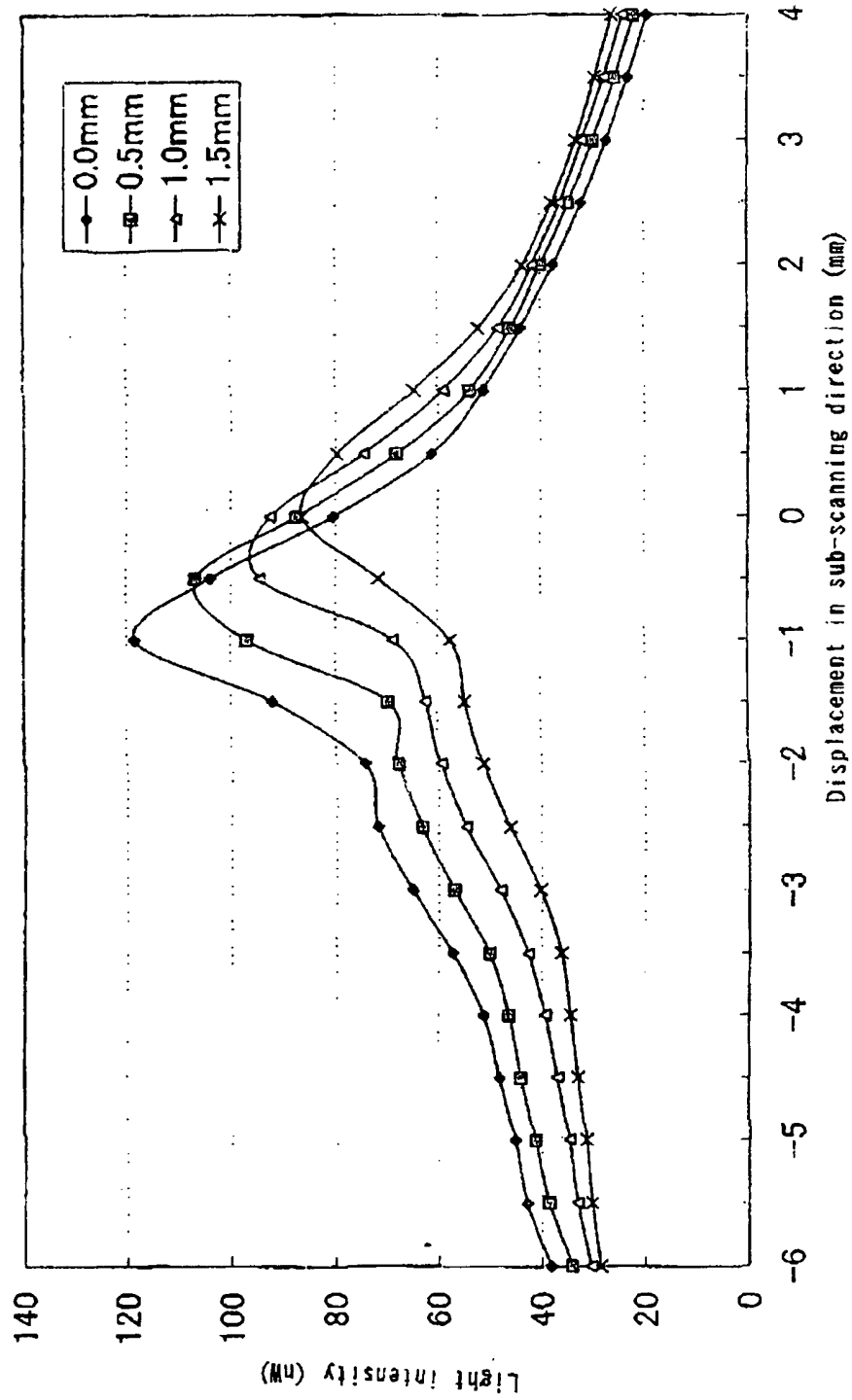


FIG. 6

Characteristics of 0.5 C chamfering & C plane printing
(With correction for decrease of lens light quantity)

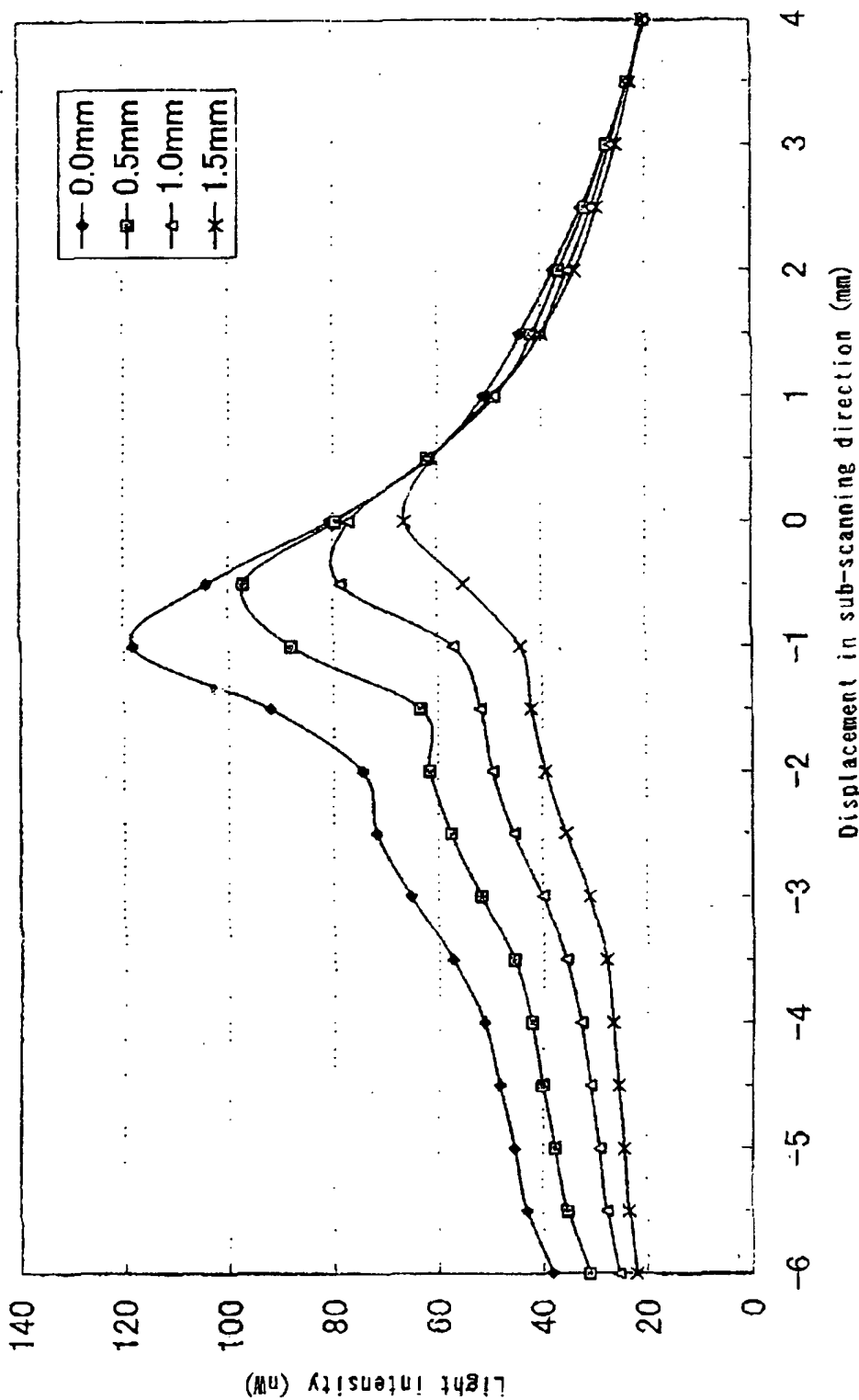
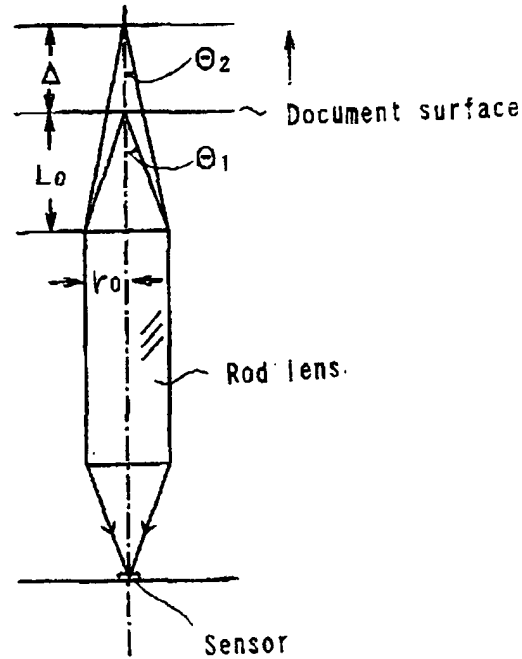
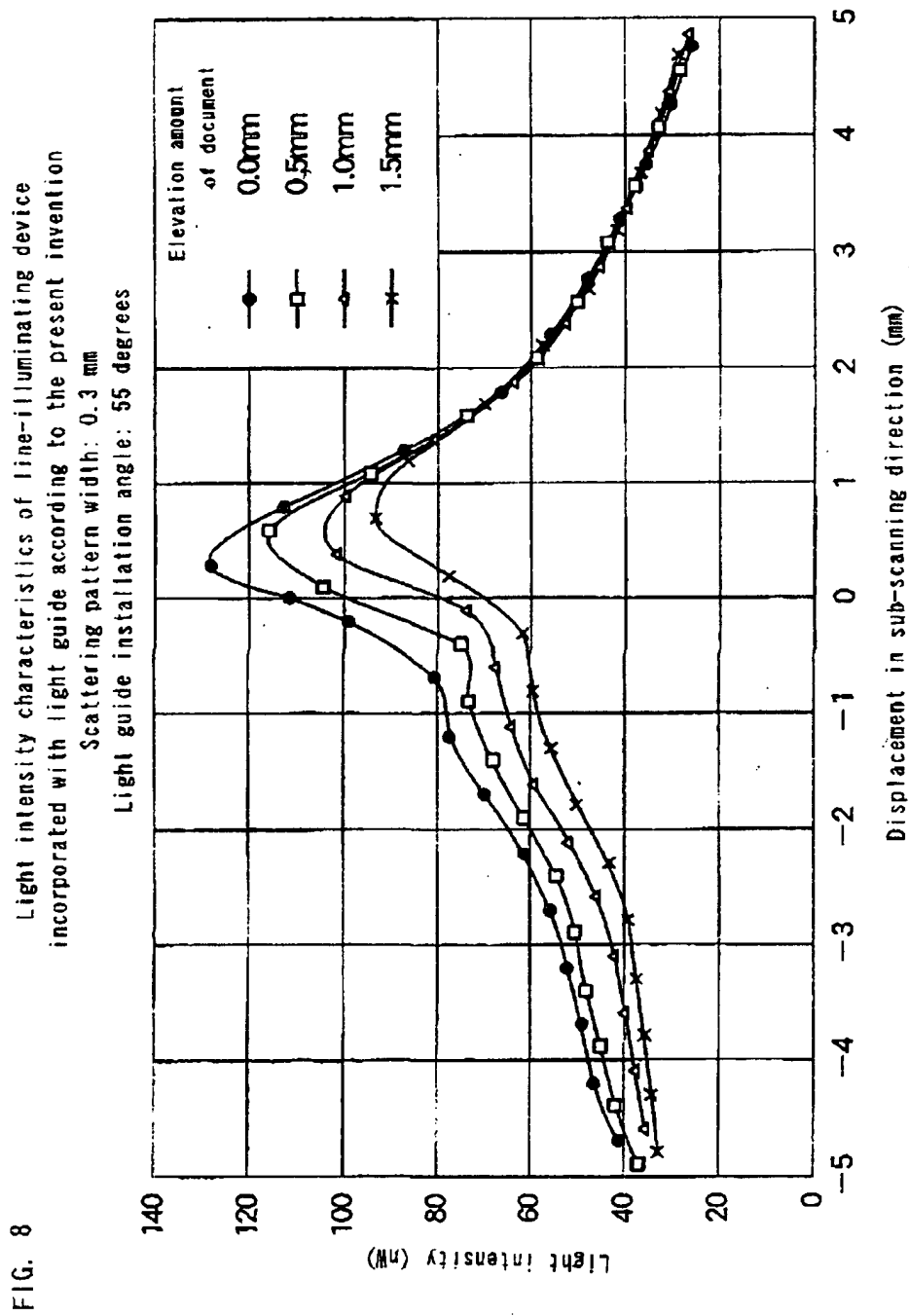


FIG. 7





U.S. PAT. OFF. FILED MAR 27 1996

FIG. 9

Document (Reading surface)

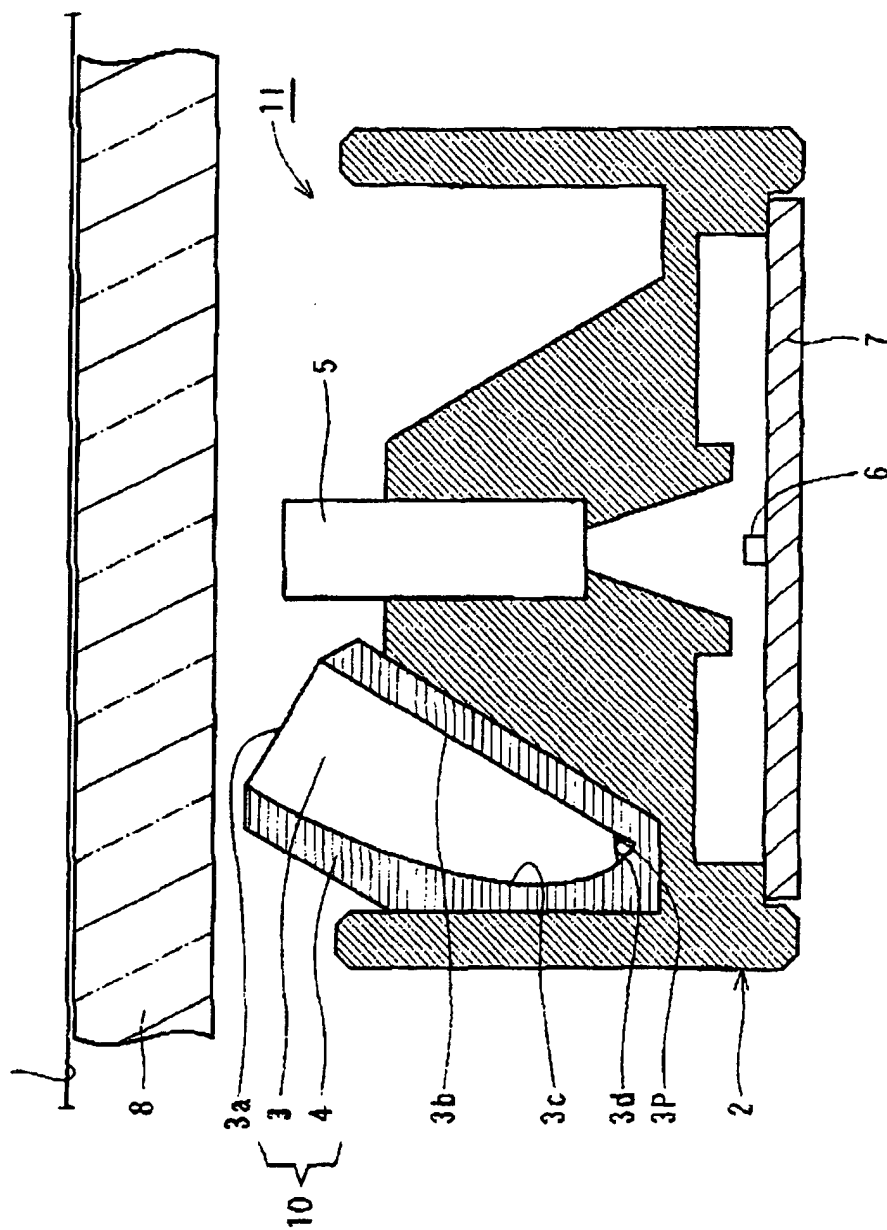


FIG. 10

FIG. 10

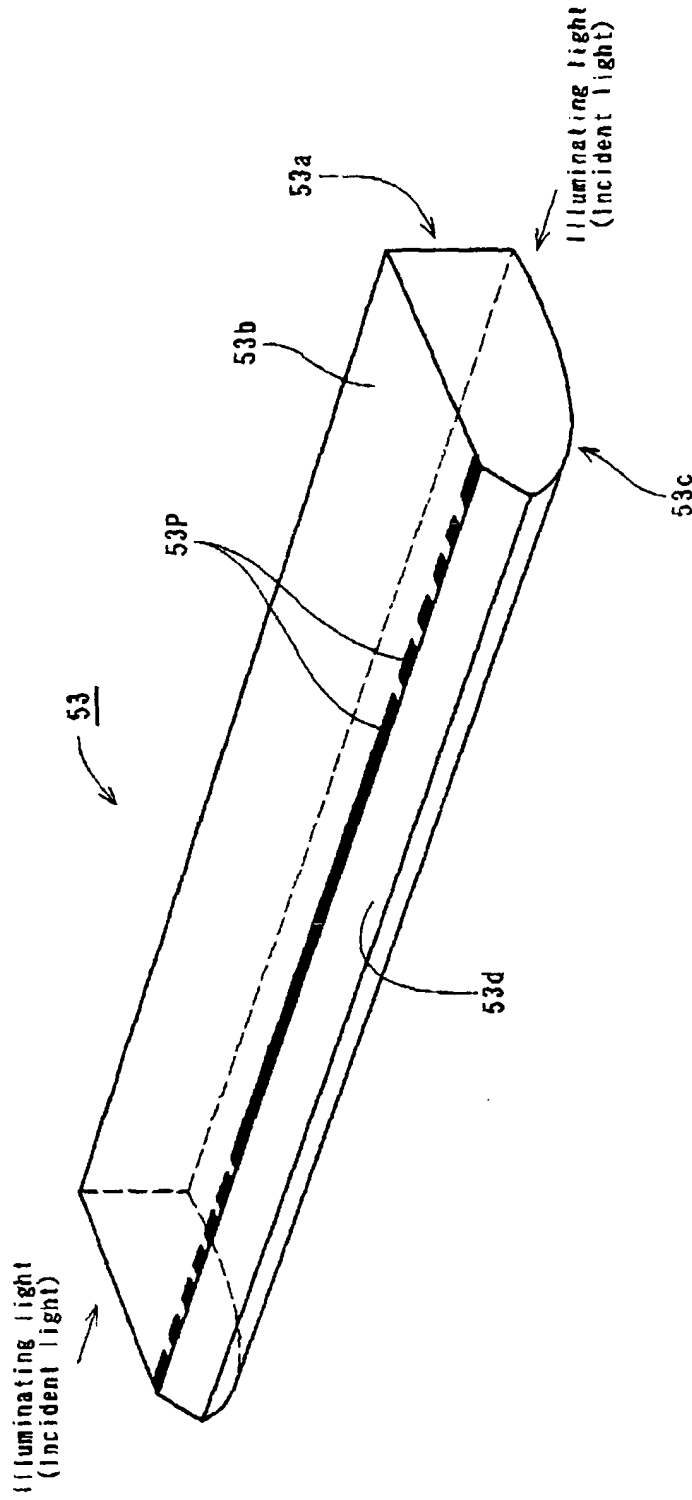


FIG. 11
 Light intensity characteristics of line-illuminating device
 incorporated with conventional light guide
 of which the edge section is chamfered

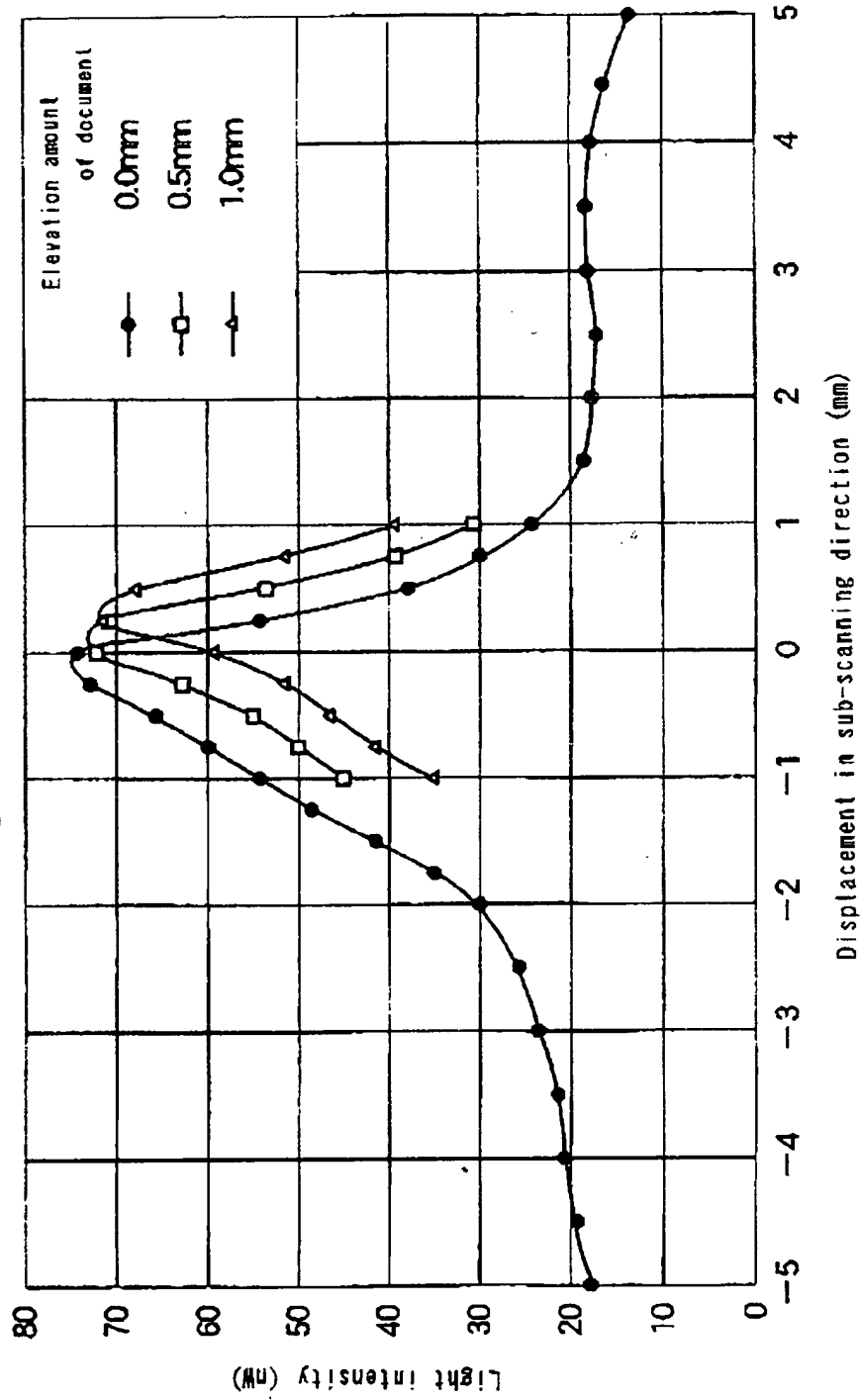


FIG. 12

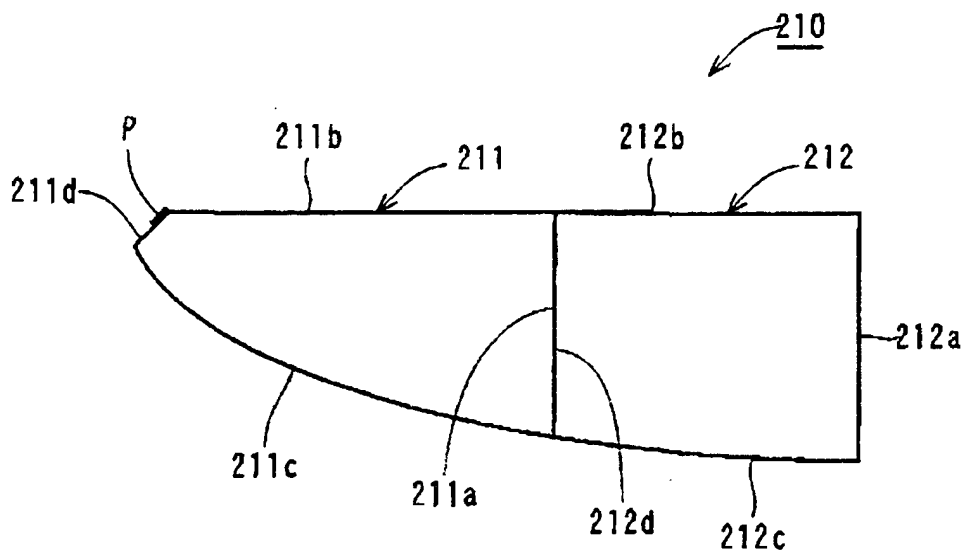


FIG. 12

FIG. 13

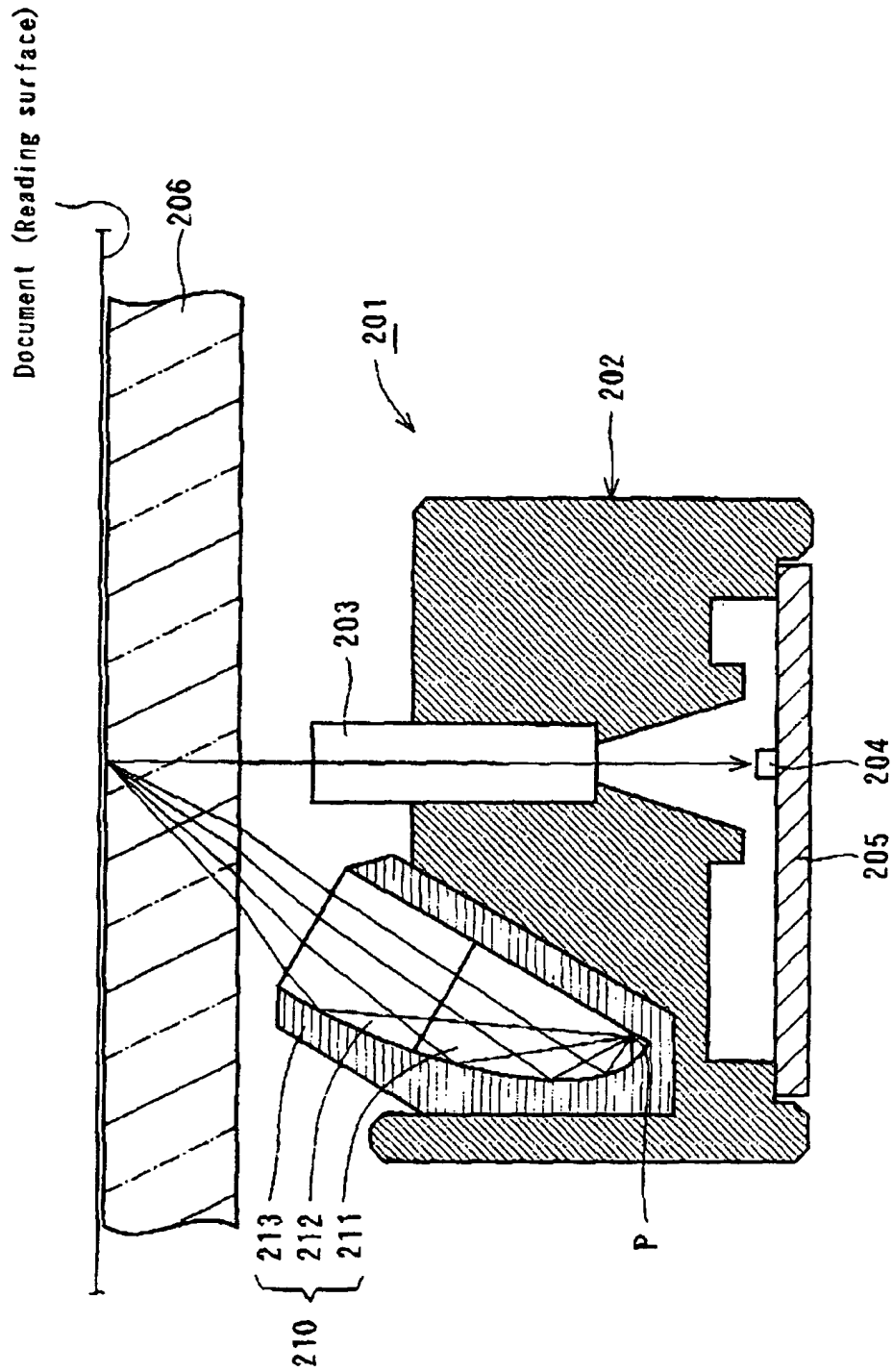


FIG. 14

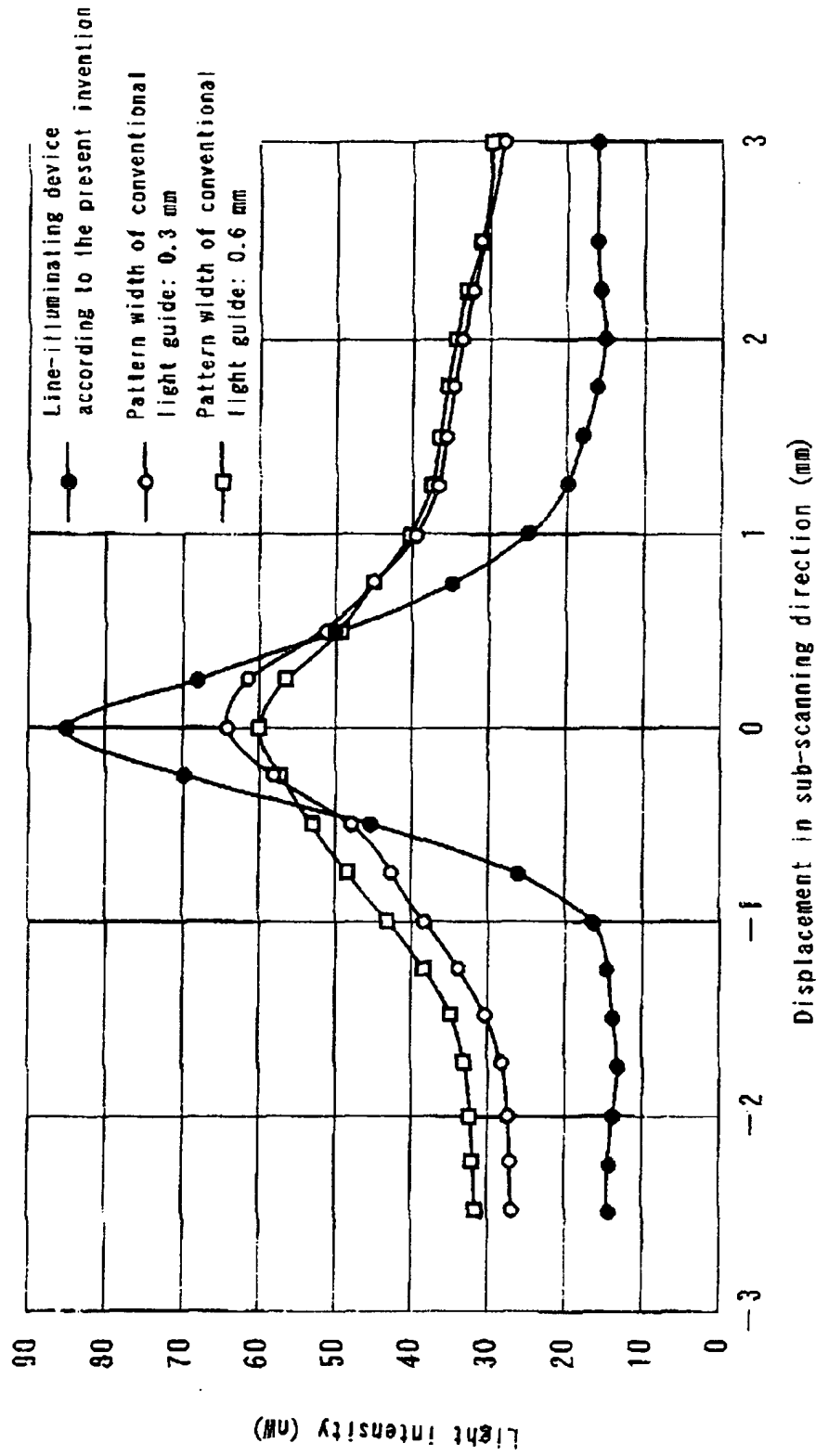


FIG. 15

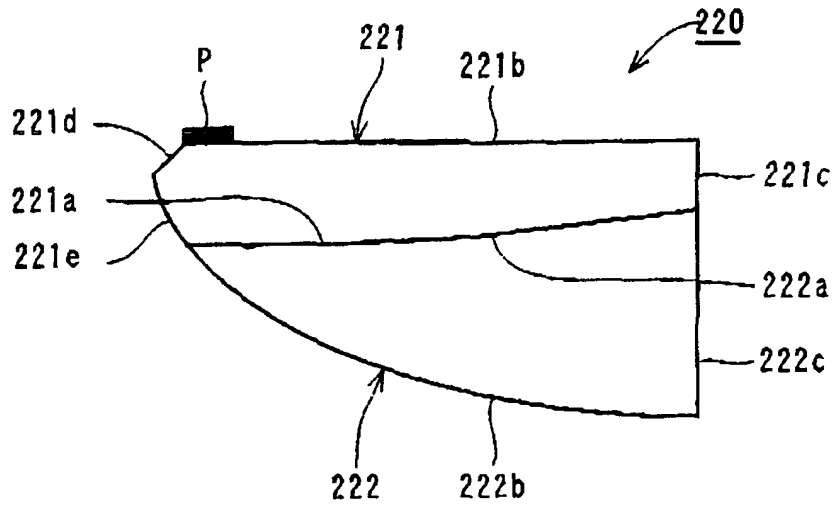
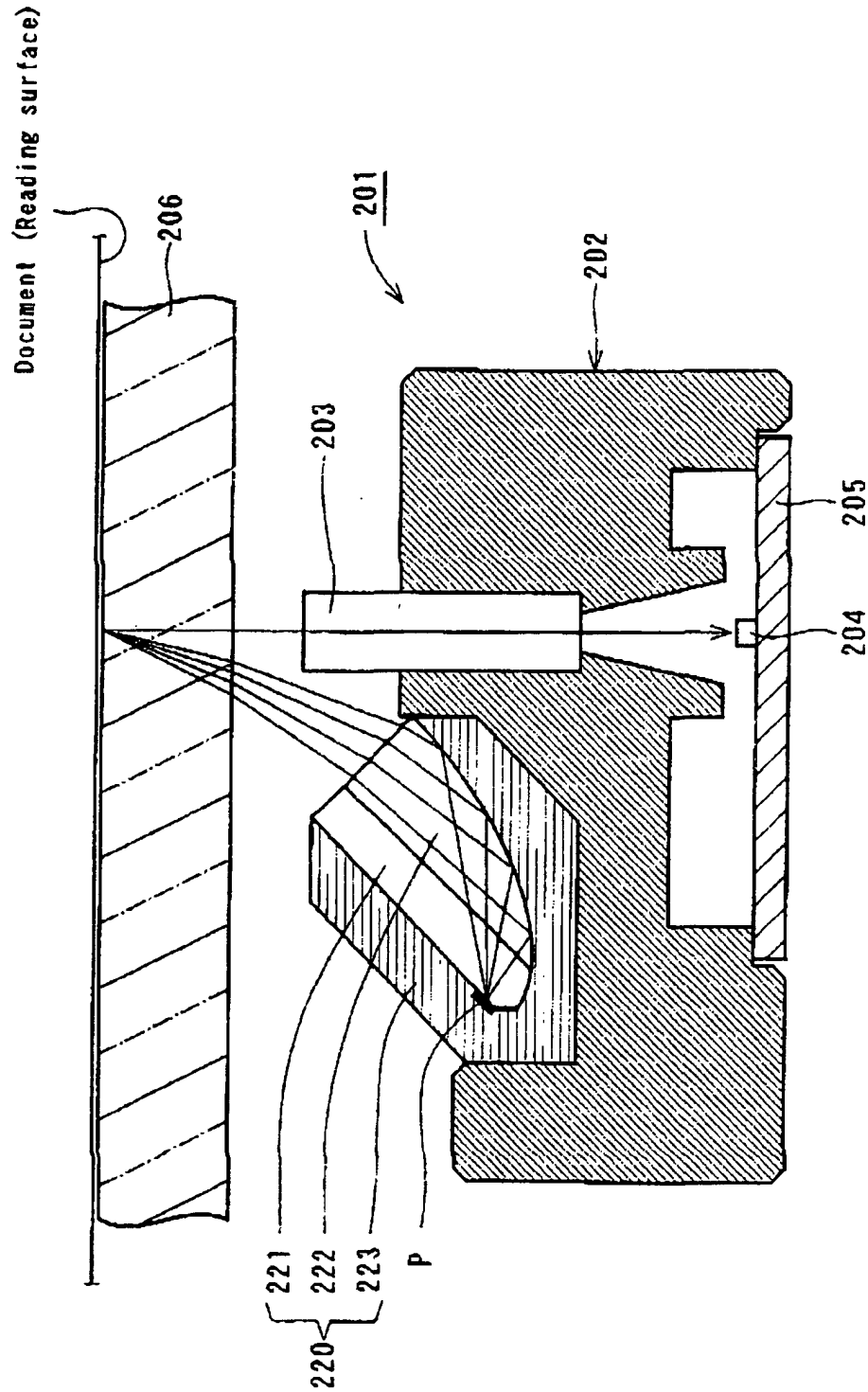


FIG. 16



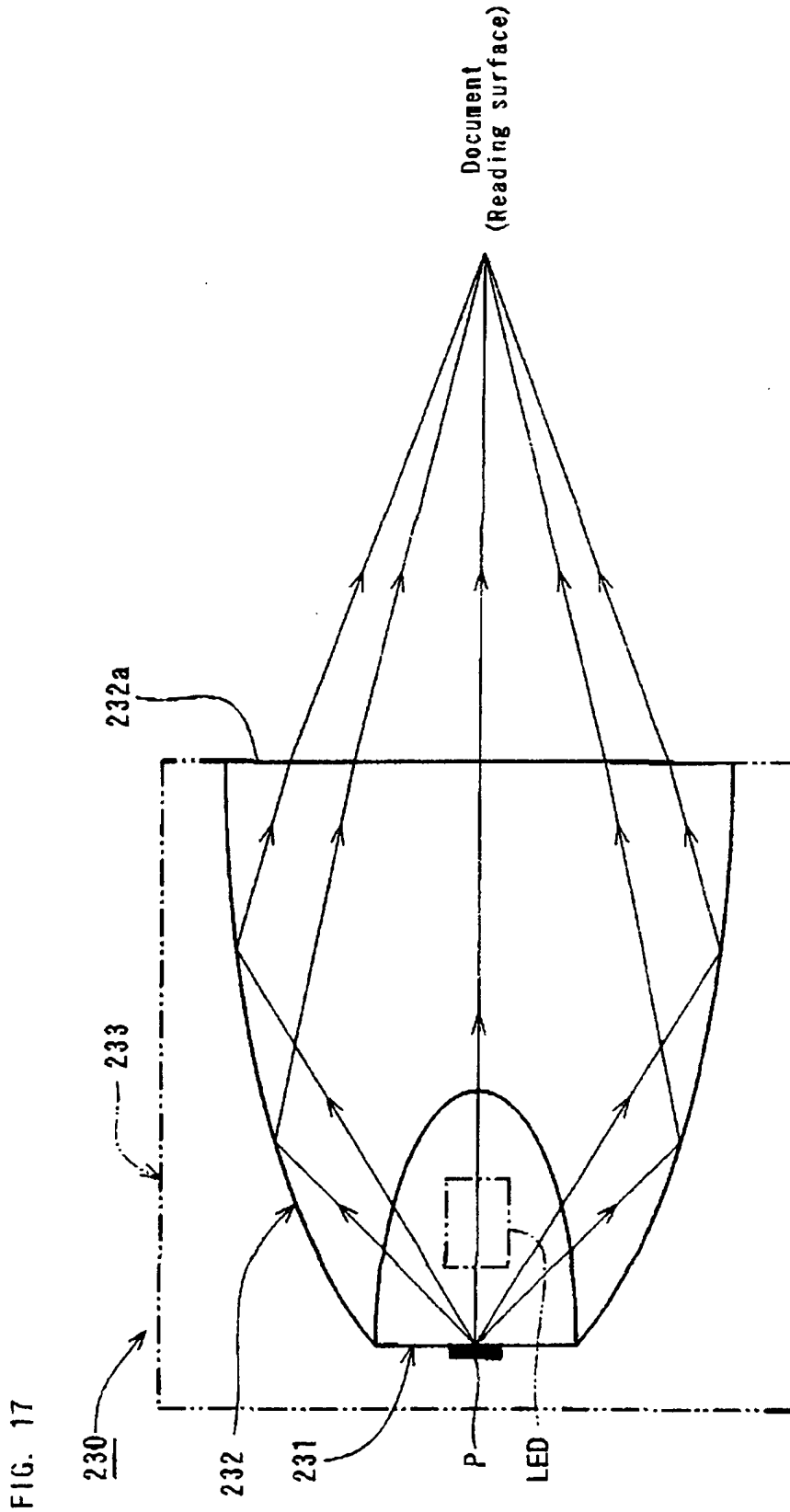


FIG. 18

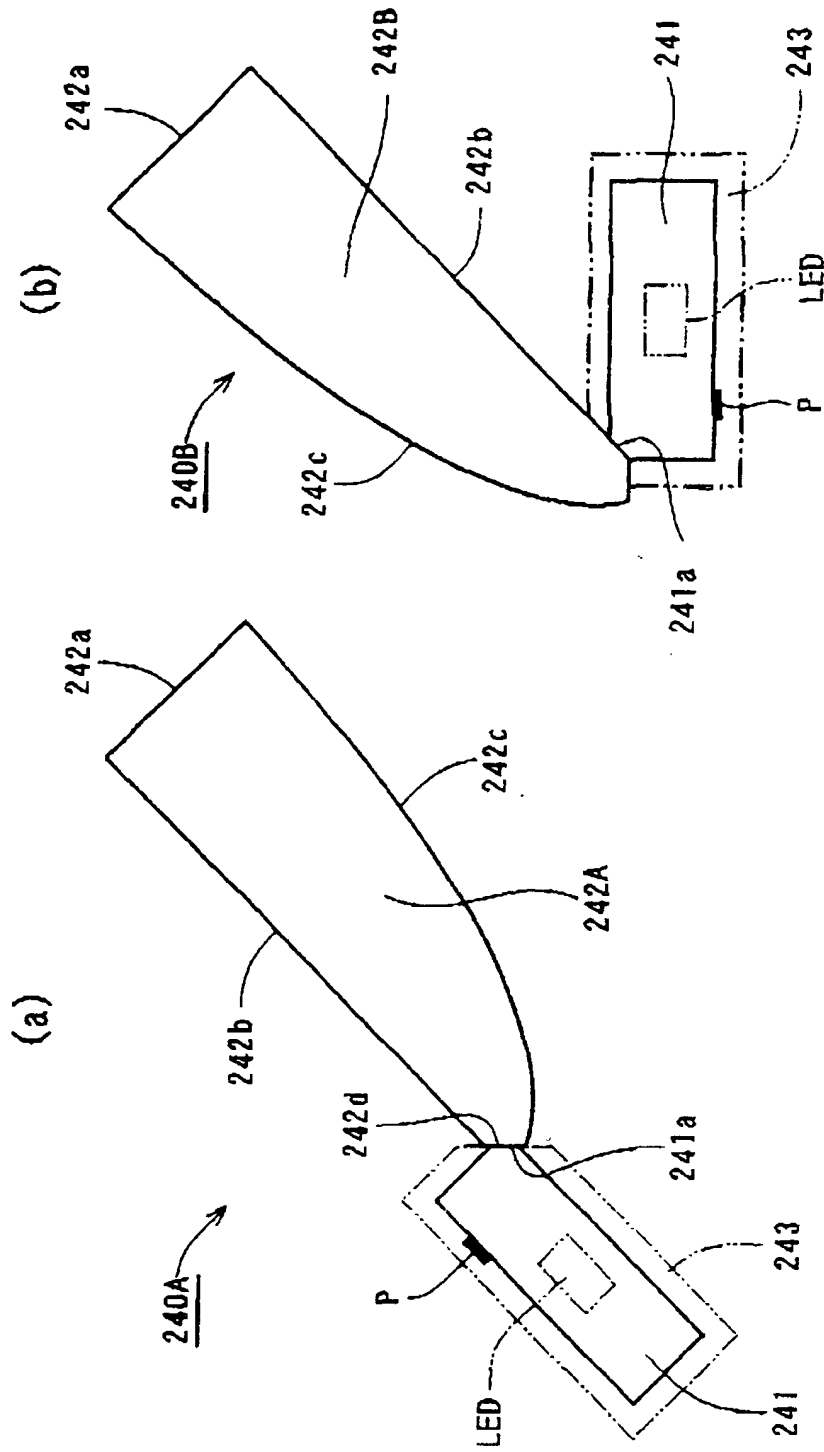


FIG. 19

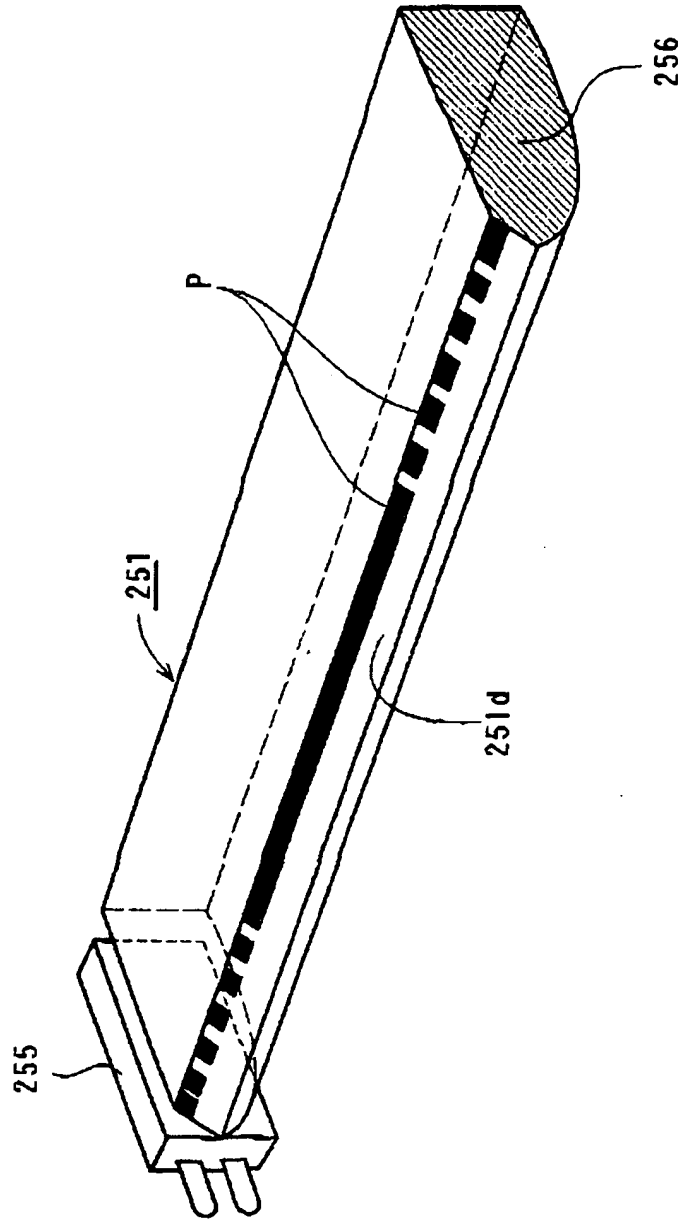
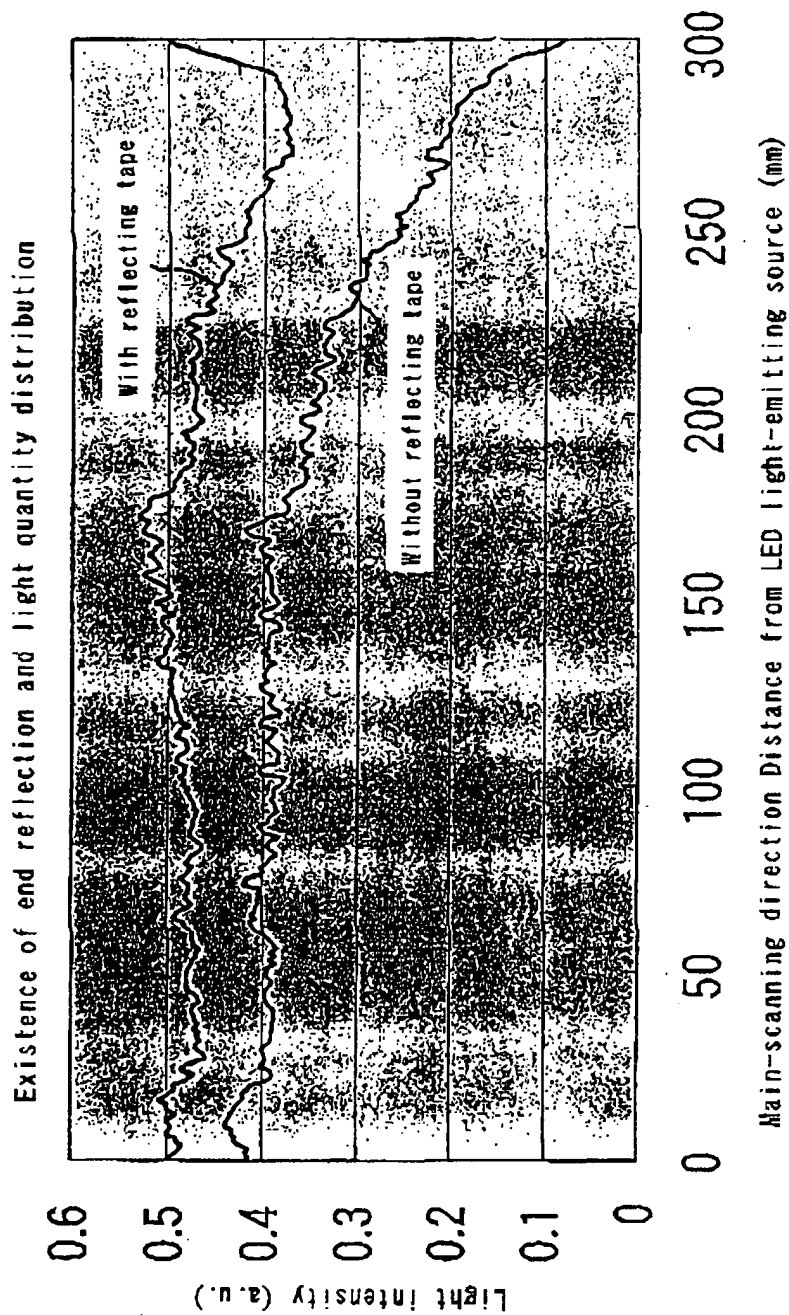


FIG. 20



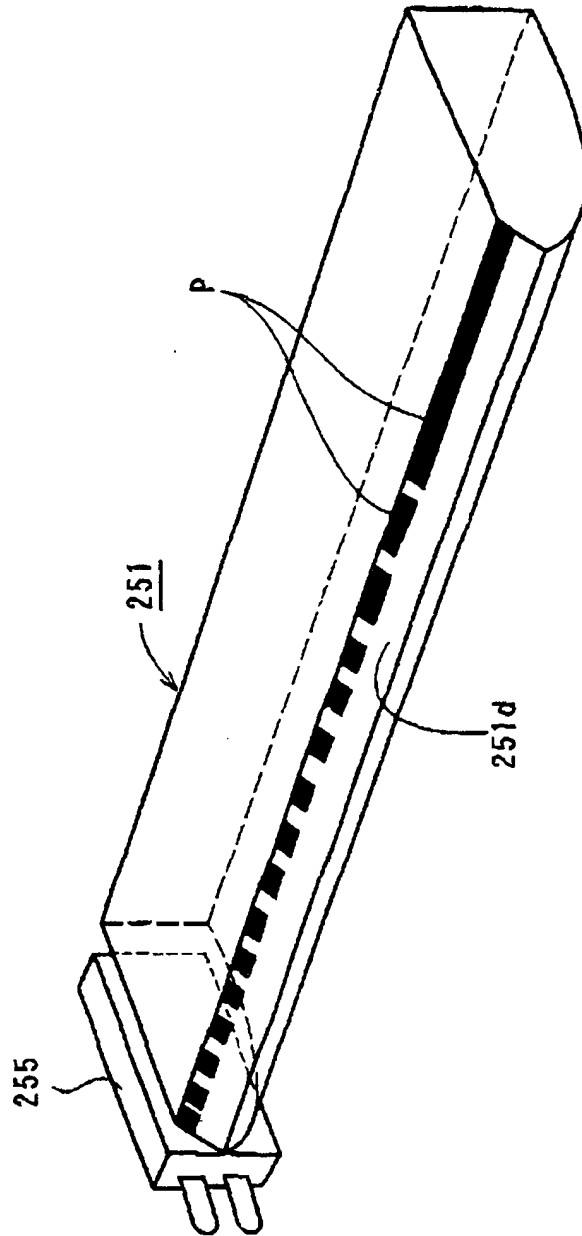


FIG. 21

FIG. 22

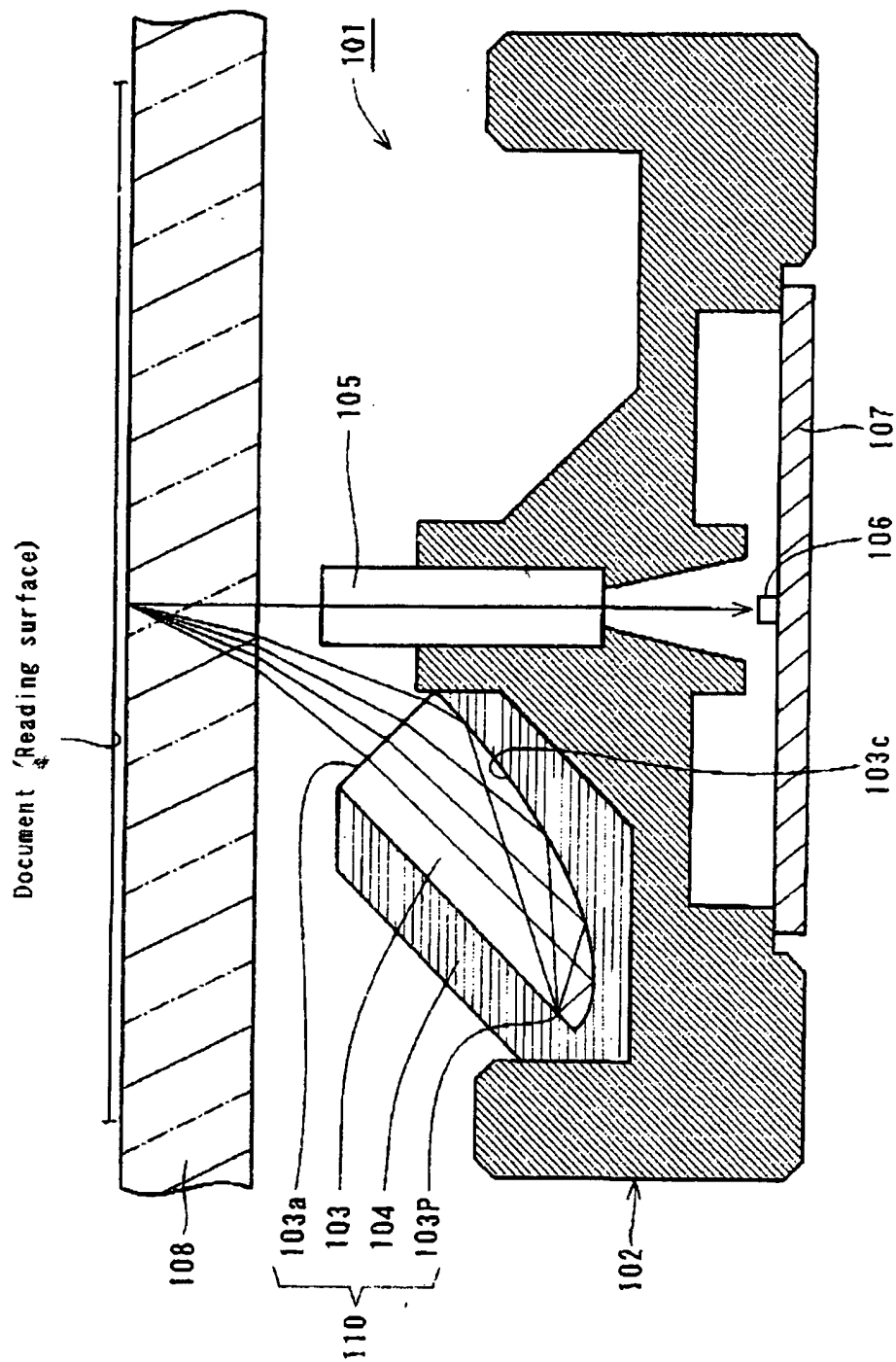
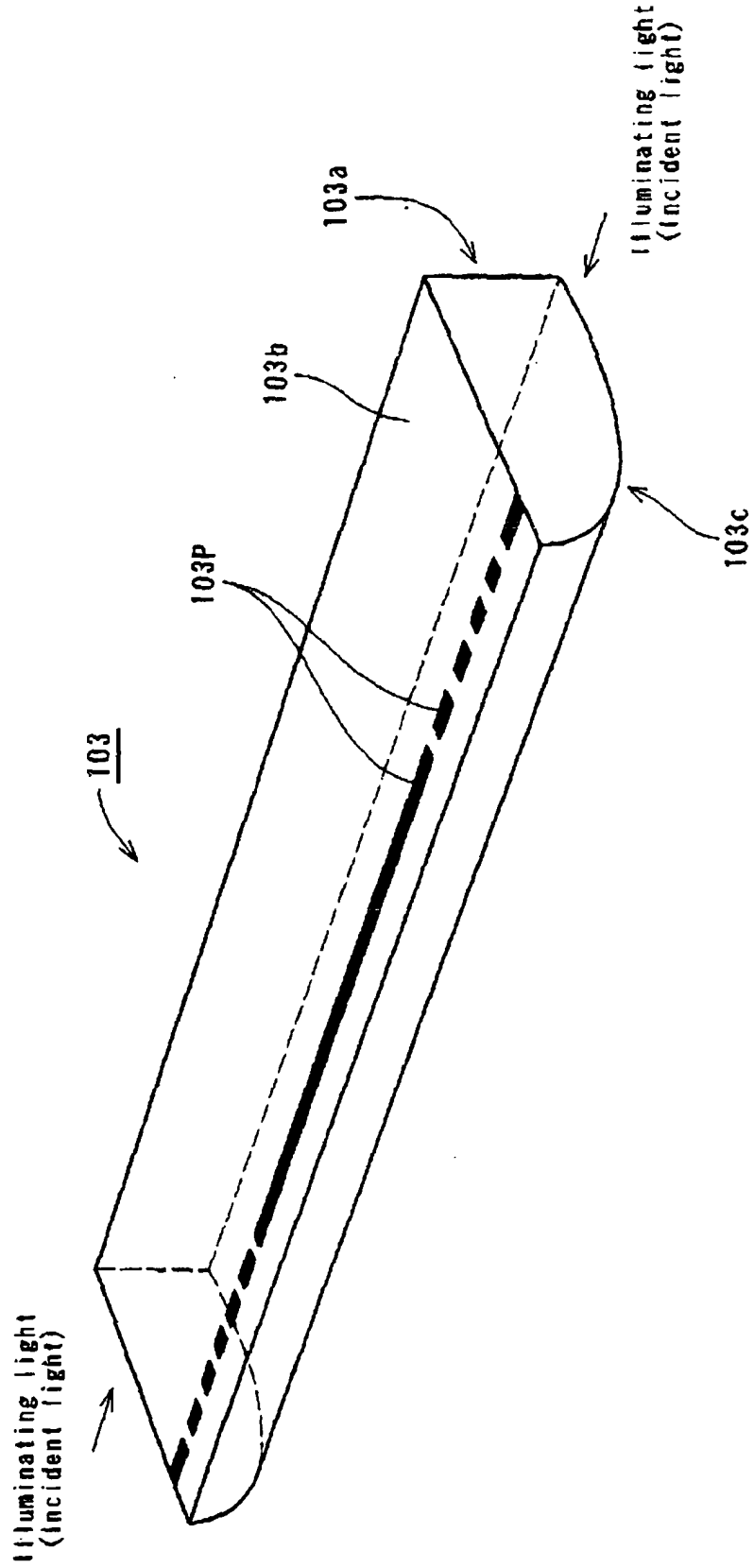


FIG. 23



Light intensity characteristics of line-illuminating device
incorporated with conventional light guide

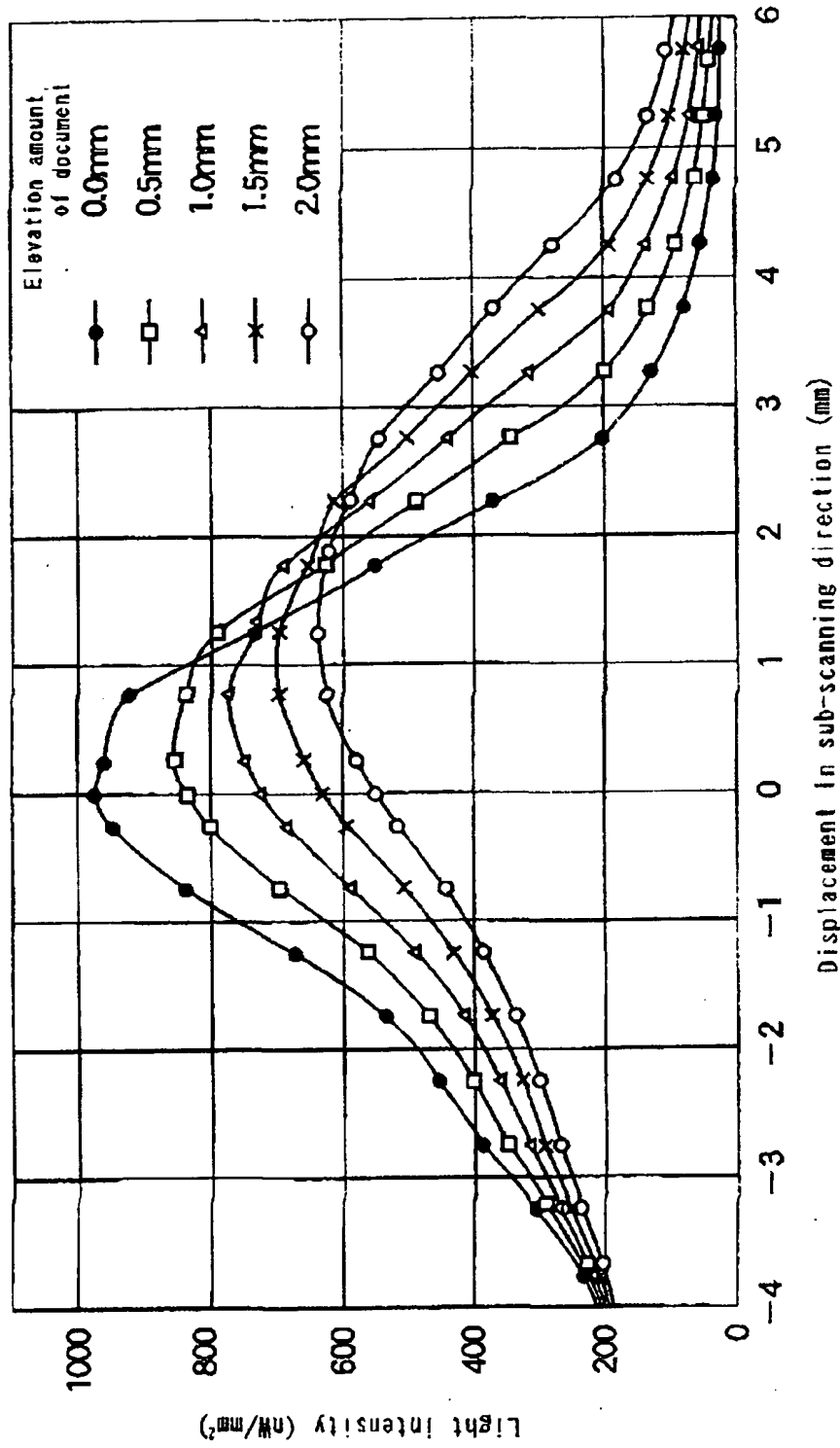


FIG. 24